مراجعات المتخصص
جروب فريق أصدقاء الكمبيوتر

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Theme 1 :Lesson 1Computer Network

Computer Network:

are group of Computers that are connected to each other

Types of computer a network

1- Wireless network 2- Wired network

Components of computer networks

Modem	used to convert the signal coming from your ISP into a digital signal.
Router	distributes the internet throughout the house, whether via cables or Wi-Fi
Switches	send data to a specific device over a network which helps to make connections easier and faster
Ports	Some devices connect to the Internet through special wires. These wires are inserted into holes that serve as ports
LAN	connected by a cable between computers is a type of wired network, such as a school's computer network

steps When you want to watch a video online

1. Your device requests the video from the internet
2. This request goes to the router.
3. From the router to the modem, which connects to your service provider
4. The ISP sends the video to the modem
5. The router receives the signal and sends the video

Artificial intelligence (AI):

- Performs complex tasks that simulate the thinking and performance of the human element.
- AI works to imitate sounds when provided with the tone of voice of an actual human being
- Examples on AI : 1. The ability to learn and replicate.
  2. Writing an article on a specific topic. 3. Imitating voices.
  4. Producing videos 5. Identifying network malfunctions

Theme 1 :Lesson 2Future Technologies

How advanced technology helps us:

1- it makes our lives easier and more enjoyable

2- helps people with special needs with many of their daily tasks

EX: The visually impaired can use augmented reality to see shapes and colors and rely on artificial intelligence to assist them with their daily tasks

	Meaning	USES
(Virtual-Reality) (VR)	Is a virtual 3d environment That allows users to explore and interact with the surroundings as if it were reality	• Visiting distant museums. • In video game, making you feel like you are flying areal plane or taking a virtual tour in space
(Augmented -Reality) (AR)	Combines the real world with virtual world by adding images using computers Can be done through a Smartphone camera or a tablet	Ex: Mobile games that place cartoon characters in the real places where you are
(Artificial - Intelligence (AI)	It is when we make machines think and behave like humans. Machines can learn from information and help us with many tasks	• Unlock your phone using facial recognition . • Smartphone predicts • Robots that can manufacture things in factories..

Theme 1 :Lesson 3 Advanced technology for people of determination

Technology user experience: It is a description of how people use and interact with advanced technological devices

we must imagine how everyone will use it

1-One of the most important goals of assistive technology

2-Improve the independence of individuals and the lives of people with special needs

How to evaluate the product?	
Useful and easy	Help in cleaning flours
desirable	Save time and effort
reachable	It can be used by the elderly or people who have difficulty moving.
It can be developed	It becomes smaller and can reach difficult places, or a camera can be added for remote guidance.

Features of the smart home robot

May be expenseve | canont deal with small opjects | It cannot clean hard corners or stairs.

Theme 1 :Lesson 4 Digital Research tools

what is a database? like a very large and organized library containing a lot of information

How do we search for information? When we want to search for information, we must choose the appropriate tool

Some different tools for digital research:	
The EKB	Is a general database. It covers many subjects
Library catalog	It is a database that includes all the resources and items
Search engines	Help people to search the internet website based on the keywords
Data bases	Are collections of information which are typically stored in a computer system
contained in the library	Is a database which includes all the items owned by library

Keyboard shortcuts..

Copy: make a copy of something, select it then press (ctrl+ c)together.

Cut: move something from its location select it then press (ctrl+ x).

Paste: place it in a new location by pressing (ctrl+ v)

Copy, cut, and paste are used commands in word processing programs

Theme 1 :Lesson 5How device operating

Operating Systems (OS): Is the software of manages computer's functions.

- ∇ It run computer's software and hardware.
- ∇ allows a user to communicate with the computer easily.

Comparison of operating system systems

Computer operating systems	Mobile operating systems
∇ Windows : The operating system used on Microsoft pcs ∇ macOS: The operating system used on apple pcs.	∇ Android : The most popular mobile operating system in the world ∇ iOS : The operating system used on apple mobile devices.

Open and closed source operating systems for mobile phones

(Closed Source)	(Open Source)
A system where the source code cannot be viewed or modified by anyone except the owing company EX: ios and windows	A system where anyone can view and modify its source code EX android.

Advanced operating systems: -the Robot Operating -driving cars. -System (ROS) and the operating systems for self.

Theme 1 :Lesson 6: Iam a website designer

What is HTML? It's the standard programming language used to create webpage. (HyperText Markup Language)

The tag is :a word surrounded by a greater than greater mark, and most access to it has a beginning and an end

Some basic tags we use today	
<html>	Is the main tag that marks the beginning and end of a web page.
<head>	Contains important information about the page but is not visible to the user, such as the page title in the browser bar.
<title>	Is used to place the page title that appears at the top of the browser.
<body>	Is the place where we place all the content that will appear on the page, like text and images.
<1> ... </h1h>	Write the largest title for the page between them.
<2> ... </h2h>	Write the subtitle between them.
<6> … </h6h>	Write the smallest title for the page between them.
…	To create a paragraph of text.
..	To make the text bold.
…	To make the font italic.
<img>	To add an image.

Let's write HTML code together:

1-Open the Note Pad program. 2-Writing HTML code

3-After writing the code, save the file with a name ending in html.

Example: first_page.html

4-Then open it using any internet browser, such as Chrome or Firefox -and you will see your first page.

Website planning to promote a product

1-The idea: A smart watch that reacts to the user's mood and changes color

2-Website name: "Magic Mood Watch"

3-Homepage components using HTML

Homepage components using HTML	
Large heading	<1h/>Discover your magic watch<1h>
Introductory paragraph	A brief description of the watch and its features</p.>
Product image	<img>You will place an advertising image for the watch.
Subheading	<h2>Why choose our watch</ h2>
Additional paragraph:	A brief description of the watch and its features

Theme2 :Lesson 1 : The world of electronic games fun and safety systems work

Video games are games that are played on electronic devices. They are based on a virtual world, making them an integral part of our lives.

Risks of electronic games

Physical risks	▪ Sitting for long periods in incorrect posture cause back , neck pain. • Constantly focusing on a screen can lead to dry eyes. ▪ Spending too much time gaming negatively impact your health
Security risks	▪ Some video games allow you to chat with other players, and sharing personal information, with a you don't know is risky. ▪ Do not click on any links sent by strangers,
Psychological risks	▪ Some players may use inappropriate language or bully others.. ▪ When gaming becomes more important than anything else, it can generate aggressive feelings, interfering with school, sleep.

Ways to Avoid the Risks of Video Games

To avoid physical risks	Take regular breaks and look away from the screen. Engage in physical activity and sports.
To avoid psychological risks	Set a specific time for playing and stick. Avoid using games as a means of escaping problems
To avoid social risks	Do not share any personal information with anyone online.

Third: The role of the family in assistance

Participation and Dialogue:
Emphasize the importance of parents involving their

Setting clear rules:
Parents should set rules for playtime and the type of games.

Theme2 :Lesson 2 : Protecting my digital data

First: How do I protect my data and privacy؟

Strong password | Fingerprint and facial recognition | Multi-factor authentication | Full encryption software

1-Strong password

Do not share your password with anyone | Do not use the same password for all your accounts | Lowercase letters, numbers symbols | not easy to guess | eight or more characters

2-Fingerprint and facial recognition:
Some modern devices use fingerprint identification or facial recognition to verify that you are the person trying to log in.
These methods are more secure than a regular password

3-Multi-factor authentication
It requires at least two methods of identification.
(such as a password with a security code or a PIN)

4-Full encryption software:
These programs protect your data, ensuring that no one but you can access it using your password

Second: My personal responsibility to protect my devices

✓Inform a parent or trusted adult.
✓Report the data theft to the relevant authorities

Theme2 :Lesson 3 : Be a cyber security hero

cyber security:
It is to protect our devices and our personal information from any danger on the Internet, such as hackers or viruses.

Create your own safety precautions plan on internet

Step 1: Strong Password
Step 2: Secure Sharing
Step 3: How to Deal with Strangers
Step 4: use antivirus software
Step 5: Use secure internet browsers

Cyber security issues

Issue 1: Malware:
Ignore the message; do not click on the link because it might be a virus

The second issue: Identity theft:
Do not share your information

If you feel you've been a victim of cybercrime... what should you do?
- Remain calm and encourage your contacts to avoid the same risk.
- Run a full antivirus scan of your device.
- Update your security settings and change all passwords.

- Notify a trusted adult who may contact the relevant authorities or your service provider

Theme2 :Lesson 4: Electronic financial transaction

Intellectual property rights:
Protection is the protection of anything new and innovative you do, such as inventing a new game, writing a story, or painting a picture. This right makes you the sole owner of your work.

Copyright: It is a part of intellectual property rights, and it pertains to artistic and literary works such as songs, films, and books. In Egypt, it is protected by a special law to encourage creators to produce more

Creative Commons: Works whose creator has given permission to share.

Public Domain:
Works that have been in the possession of the creator for 50 years and are free to be used by anyone else

The concept of the stock market:
is a very large market for buying and selling shares in large companies

Shares: They are small portions of a company's ownership

electronic financial trading:
use special online applications to buy and sell stocks from anywhere.

How does online financial trading help you provide financial advice?

We provide you with an advisory robot that helps you in the stock market in the following ways:

It reads information extremely quickly	The robot can read thousands of news items about companies in seconds
Offers advice	After the robot reads all the information, it gives the adult a simple piece of advice
Assists in decision-making	The robot doesn't make decisions for the adult, but rather provides intelligent assistance to help them make a better decision

Theme2 :Lesson 5: Cloud computing

Cloud computing: It allows data and programs to be stored and accessed through online servers. You can store your photos, work, games, and files on it, access them from any other device with an internet connection anytime, anywhere, and share them with others.

Advantages and disadvantages of using cloud computing

Advantages

- Never lose your files
- Share easily
- Ease of access
- SAVE SPACE
- Data protection

Disadvantages

- Internet access required
- Security risks
- Additional costs

cloud computing service providers

OneDrive
A service owned by Microsoft, similar to Google Drive.

Dropbox
An application owned by Drop Box.

Google Drive:
One of the most popular providers, used for storing and accessing files from anywhere

Theme2 :Lesson 6: Cloud storage applications

Cloud storage applications
are used to store your data and access it from anywhere in the world

Microsoft 365:
It is considered one of the most important programs that deal with cloud computing, and it provides a group of applications such as:

Word – PowerPoint – Excel – Teams – OneDrive

Notice: The best way to store your files is to use both methods together.

Traditional storage:
It's faster, allowing you to access your files instantly, even without an internet connection

Cloud storage:
It's more secure, protecting your files from being lost if your device malfunctions

Cloud storage with OneDrive:

- is a cloud storage and sharing application that allows you to access your files from any device, provided it has an internet connection
- more secure and practical than traditional storage, which is used only for storage on your device

How to upload files and folders to One Drive

- **Step 1:** Open the One Drive app on your device or the website using an internet browser.
- **Step 2:** Look for the "Upload" or "Add" button at the top of the screen.
- **Step 3:** Select the file, tap the button, and then choose the file or folder you want to save to the cloud.
- **Step 4:** Wait: Your device will start uploading the file, and a small checkmark will appear to confirm that the file has been successfully saved to One Drive.